

THE NILE BASIN CAPACITY BUILDING NETWORK (NBCBN)

Curriculum Vitae



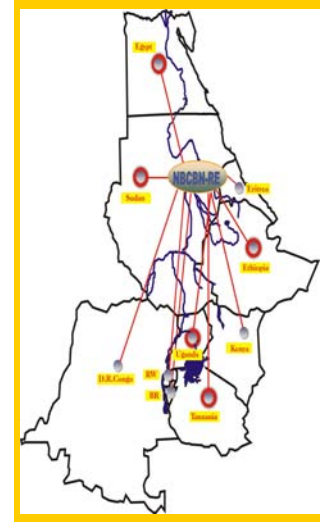
GENERAL BACKGROUND

Title: Nile Basin Capacity Building Network-for River Engineer (NBCBN-RE).

Involved countries: Burundi, D.R. Congo, Egypt, Ethiopia, Eritrea, Kenya, Rwanda, Sudan, Tanzania and Uganda.

Partners: Hydraulics Research Institute (HRI) Egypt, UNESCO-IHE, the Netherlands

Involved organizations: Université du Burundi, Ministry of Environment **D.R. Congo**, Hydraulics Research Institute **Egypt**, Ministry of Water Resources **Eritrea**, **Addis Ababa University**, Nairobi University **Kenya**, Institut de Recherche Scientifique et Technologique **Rwanda**, UNESCO Chair in Water Resources **Sudan**, Dar Es Salaam University **Tanzania**, and Makerere University **Uganda**.



Years in business: 8 years
Network members: 400 Nile Basin Water Professionals
Contact email adresse: nbcbn-sec@nbcbn.com
Contact address: 13621, Delta Barrage, Cairo, Egypt
Website: <http://www.nbcbn.com>

KEY QUALIFICATIONS:

The NBCBN-RE knowledge network is young, active, has much potential and can contribute through its multi-national, multi-disciplinary and multi-stakeholder research to sustainable solutions for integrated water management, the achievement of the Millennium Development Goals and the Nilotic water & climate dialogue. It is the project pilot where Knowledge Networks and CoP principles is developed, tested, applied and monitored, while at the same time the concepts, approach, research results and lessons learned are pro-actively disseminated to new network initiatives in the region, like the NBI induced program.

The Main Concept based on which NBCBN was established is to create an environment in which professionals from the water sector sharing the same river basin would have the possibility to exchange ideas, their best practices and lessons learned.

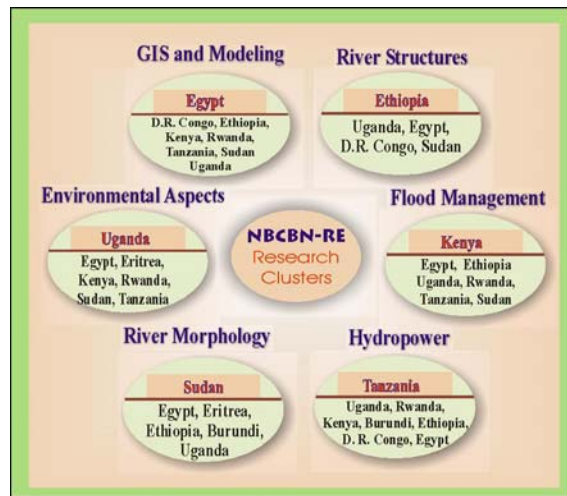
The goals of this demand driven network are to complete and strengthen this knowledge network, to support its Communities of Practice, to build a sustainable knowledge base, to generate and implement joint research with tangible outputs, contributing directly to production of knowledge in water resources management and utilization into diverse external processes, to disseminate its lessons learned and to co-create sustainable ways of collaboration, knowledge dissemination and knowledge networking. In addition, the project targets at getting a better understanding of the impact of CoP's and knowledge networks themselves to improve the flow of knowledge from demand, through knowledge production and societal dialogue till action.

NETWORK STRUCTURE

Network Nodes: The NBCBN has been designed as an open regional network with nodes in each of the Nile basin countries. Each Nilotic country is one node of NBCBN. NBCBN contains 10 nodes which are Burundi, D.R. Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, and Uganda.

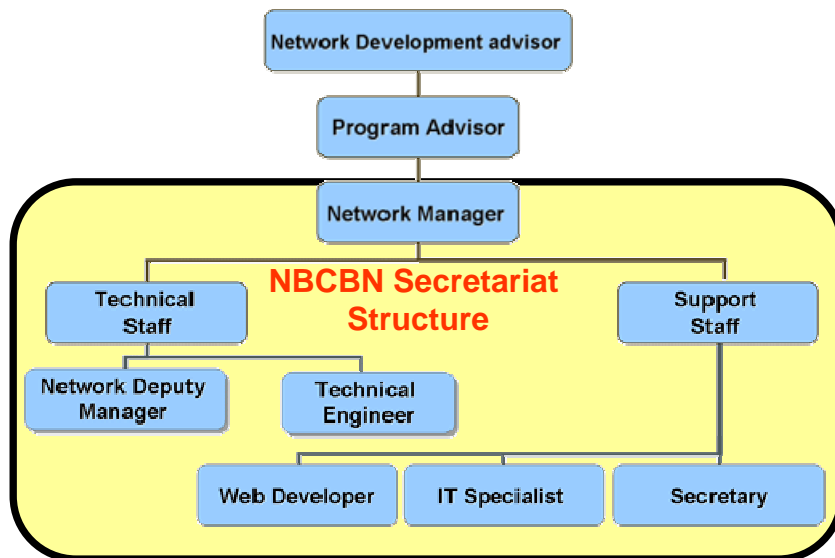
Research Clusters: A research cluster is a group of professionals coming from 5 – 7 different Nile basin countries that carry out research activities to enhance their research skills and capacity in a particular sub-topic in river engineering. One country is taking the leading role as a host of the research cluster, while the others are playing an active role as research cluster member. The research clusters are **GIS and Modeling Applications in**

River Engineering, River Structures, Environmental Aspects of River Engineering, Flood Management, Hydropower, and River Morphology.



ADMINISTRATIVE AND FINANCIAL STRENGTHS:

The main administrative body of NBCBN is the Network Secretariat office which is hosted by the Hydraulics Research Institute, of Egypt. The Network secretariat is the entitled implementing office of the network to take the organizational and implementation role of the network different activities. The main mission of the network secretariat is the Elaboration and implementation of the work plans. The shown figure describes the network administrative structure



NBCBN OWNERSHIP AND STEERING

The network is jointly owned by the participating countries, represented by the participating institutions (Ministries, research institutions, capacity builders, NGO’s and end-users) from the different riparian countries, and steered by the NBCBN Steering Committee. The Steering Committee is composed of the 10 Country Coordinators of all ten NBCBN focal institutions and selected NBI representatives.

FINANCIAL SUPPORT FOR NBCBN

NBCBN is currently supported through a Dutch project titled "Knowledge Networks for the Nile Basin KNNB". The project is financed by the Dutch government and coordinated by the UNESCO-IHE. Between phase I and phase II of the network there was a bridging period in which the financial support was given through the Nile Basin Initiative (NBI).

CAPACITY BUILDING ACTIVITIES AND EXPERIENCES

First: Collaborative Research Activities

Clusters Research

The main objectives of this research is to strengthen the individual research capabilities of water professionals through collaboration at cluster/group level on a well-defined specialized research theme within the field of River and Hydraulic Engineering. This research modality is activated through implementation of research proposals and topics under NBCBN research clusters.

Integrated Research

The main objective of research modality is to demonstrate the effectiveness of the network in implementing more integrated applied research that tackles real life problems in the field of river and hydraulic engineering by making use of the expertise from three or more clusters or research groups. This research is implemented through the formation of an integrated research team from at least three clusters.

Four integrated research projects supported by NBCBN, the first one is Hydropower Potential as a cooperation Catalyst between Nile Basin Countries, the second is Integrated flood and drought management for sustainable development in the Nile Basin (Nzoia and Kagera River Basins), the third project is Sedimentation Problems and Its Impact on Hydropower coordinated by Tanzania, the last project is Future Hydropower Scenarios for the Riparian Countries of the Lake Victoria Basin.

Local Action Research

The main objective of this research modality is to contribute to the capacity building process at local level and enhance the collaboration among the researchers in the same country. Although the NBCBN network was set up to stimulate *regional* collaboration among professionals from the Nile basin countries, experiences show that the link between the focus of the clusters and the specific research questions at the country level is missing to some extent. To stimulate this relation, research at country level is supported. This activity is the core activity of the new NBCBN nodes is contributing to the establishment of the in-country network. At the same time this leads to the capacity enhancement at regional level through the link to the cluster research activities.

Multidisciplinary Research

The objective of this research modality is to demonstrate the contribution of the network through its generated knowledge and developed capacity in enhancing the research activities in water related fields. In this research modality the network will contribute to project team(s) that will address research and development topics that are of a multi-disciplinary nature. The topics are (i) Impact of climate change, (ii) Water scarcity and (iii) Floods and droughts.

Second: Training Activities

Training activities receives attention as one of the important NBCBN activities. The following main strategic lines are followed for project support for training activities in the network:

- Support to network members to attend the 3-month diploma course in River and Hydraulic Engineering at the Regional training Centre RTC of the Hydraulics Research Institute HRI (fellowships)
- Organization of short training courses in topics of high interest to the region with the support of other organizations (ATP of NBI, UNESCO-IHE , CapNet, IWRM Nile Net.)
- Organization of Specialized training activities that support the network research activities. During the regional workshops, specified training sessions are programmed.
- Initial steps are made to introduce distance learning activities. The Network aims to support the development of lecturing materials that support the research activities after which it will be posted at the NBCBN collaborative platform. These materials will be freely available for the researchers in order to enhance their knowledge.
- In order to disseminate the research results the Network encourages research groups to develop training and lecturing material to be used in both distance learning and/or face to face regional training modules.

EXPERIENCES IN INFORMATION AND KNOWLEDGE MANAGEMENT

It is recognized that information and knowledge can contribute to improving the performance and effectiveness of both individuals and organizations, provided that there is a basic capacity in place to manage this resource. The capacity to manage information and knowledge needs to be viewed as an integral part of organizational capacity building strategies. As knowledge is becoming the main source of an organization's competitive edge, so will be the access to knowledge. NBCBN within its capacity has developed the following tools/systems to serve the knowledge sharing and management.

Data and Information Management systems: is a computer based system which optimizes the collection, transfer and representation of information by using an integrated structure of databases and information flow. The system is built up of several components that help to accomplish NBCBN secretariat activities in effective and fast way. The system includes the following tools:

- NBCBN members and contacts data management tool,
- Workshop Organizer tool,
- Archiving tool,
- Financial reporting tool

Nile Basin Knowledge Map: is a web-based information management system that offer an easy access to all information related to professionals, organizations, training courses, Networks and projects related to/working in the water sector in the Nile Basin countries. The main objectives of the KM are:

- To enable individuals to present their knowledge sources to each other and to key clients in a common, transparent framework.
- To provide an access to information and knowledge that is important for success in the core businesses of the Networks/Institutions, that is education and training, research and life-long learning related to water and environmental systems.
- To increase the ease and speed of co-operation among individuals, and their core constituencies, faculty, students, administrators, funders, and sector users.

Knowledge Sharing and collaboration platform: The knowledge platform maximizes the efficiency of geographically dispersed NBCBN Communities of Practice (CoP's; research groups) in knowledge sharing and collaborative working. The platform provides facilities for

- Accessing and connecting the community easily
- Leveraging tacit knowledge, and increasing incentives to sharing information
- Documented explicit knowledge to use
- Distributed learning
- Collaborative working

The NBCBN collaborative system provides basic cooperation support based on the metaphor of 'shared workspaces'. A shared workspace acts as a repository for document and other data which can be accessed by the members of that workspace. Collaborative work with NBCBN members requires membership in groups associated with the shared workspace. These groups are built dynamically by the users themselves: each user has a private space from where he/she can access his/her workspace and private folders. If the user wants to share information with others he/she can simply click in front of the desired file and/or folder to send a copy of it to the shared workspace of his/her community. The system uses icons and colors to indicate changes in the workspace. Using an ordinary Web browser, users of the NBCBN system can browse their workspaces, transfer documents from a shared workspace to their local computer and vice versa (document download and upload). As described so far, NBCBN is simply an interface to a central FTP-like file store.

NBCBN Research Supporting Data bases: Within the research activities of the different NBCBN research clusters number of data bases have been developed to serve the research implementation and also to represent the research output. The following are some examples:

- Web based Reservoir Information System for the reservoirs all over the Nile basin was developed under the research activities of the River Morphology clusters. The objectives of this system are to increase the ability of understanding the sedimentation problems in the different reservoirs and to enable the researcher to come up with common vision in better managing the reservoirs.
- Within the GIS-Modelling Research cluster researcher activities a Geo-database for pilot areas in the Nile Basin for sustainable watershed development and integrated management was developed. Based on the availability of data, three pilot areas were selected: Qena Valley catchment area (Egypt), Simiyu River catchments (Tanzania), and Lake Victoria catchments.
- Database of existing traditional and modern diversion systems schemes in the Nile Basin was developed within the activities of the River Structures Research cluster. The main objectives of this database are:
- Identify most pronounced problems of the diversion schemes and analyze them from hydrological, sediment, hydrology, operational and environmental points of view
 - To assess the potential and status of utilization of the resources
 - To undertake performance monitoring and evaluation of the schemes
 - To obtain milestone for future planning, design and implementation of similar schemes

LINKS WITH REGIONAL AND INTERNATIONAL PROJECTS

Although the NBCBN network could be considered as a pilot activity at its start in 2000 and unique in the region in supporting professional water-related staff to conduct applied research, other activities in the region are also initiated by other organizations with similar or complementary objectives. Therefore it is felt important to put effort in linking the network with its activities and output with other relevant projects at international and regional level.

As the NBCBN has agreed to be part of the Nile Basin Initiative (NBI) set-up it is felt as essential to link with all relevant NBI Shared Vision Program SVP and Subsidiary Action Program SAP projects. The network should be seen as supportive and complementary to these projects and interested to do the research part.

In addition, linkages with other regional and international projects that focuses on capacity building, research and networks/partnerships establishment are strengthen the network and motivate professionals to join the network and contribute to its activities. NBCBN has succeeded in creating links and cooperation opportunities with several projects on regional and international levels, such as:

- The Applied training program (ATP) of the NBI
- FRIEND-Nile
- AWARE-NET
- Partnership for Water Education and Research (PoWER) of the UNESCO-IHE
- CAP-Net
- Water net

PUBLICATIONS

Nile Water Science and Engineering Scientific Journal www.nilebasin-journal.com

- Volume I October 2008
- Volume II (Special Issue on Water and Climate) June 2009.

General Reports

- NBCBN declaration
- Cairo declaration
- NBCBN operational guidelines

Research clusters group's reports

- Legal And Institutional Framework For Environmental Management Including EIA
- Best EIA Practices And Guidelines EIA Guidelines And Support Tools
- Flood and Drought Forecasting And Early Warning Program for The Nile Basin
- Flood and Catchment Management
- Floods and Their Influence on The Nile River System
- GIS-Based Watershed Modeling In The Nile Basin Countries
- Small Scale Hydropower For Rural Development
- Regional Power Integration In Hydropower
- Assessment of The Current State of The Nile Basin Reservoir Sedimentation Problems
- Towards The Improvement of The Protection Methods Against Bank Erosion
- Watershed Erosion and Sediment Transport
- Design And Operation of Diversion Systems
- Micro-Dams

Newsletters

- Issue 1,
- Issue 2,
- Issue 3,
- Issue 4,
- Issue 5,

Informative CD's

- NBCBN structure and members CD,
- NBCBN research reports CD

- NBCBN History and facilities CD